

3.01 - 10/26/1994 - 00209



DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1510 GILBERT ST
NORFOLK VA 23511-2699

TELEPHONE NO:

(804) 322-4776

IN REPLY REFER TO:

5090

1822:JFH:cag

OCT 26 1994

CERTIFIED MAIL RETURN RECEIPT REQUESTED

U.S. Environmental Protection Agency
Attn: Mr. David Toth
Mail Code: 3HW61
Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

Re: Final Corrective Measures Study for Petroleum
Contaminated Sites

Dear Mr. Toth:

Enclosed please find four (4) copies of the Final Corrective Measures Study for Petroleum Contaminated Sites (11, 18, 19, 20, and 24) at NAS Oceana. Also enclosed as supplements to this submittal are a response to the EPA's August 25, 1994 comment letter; detection limit tables; data validation reports; and analytical data sheets from the RFI Phase I Report and the RFI Phase II/CMS/POL Report. The detection limit tables, validation reports, and analytical data sheets are enclosed per our September 15, 1994 phone conversation. We have incorporated all EPA comments and the pertinent comments from the Virginia DEQ into the Final CMS Report. Comments regarding groundwater at Site 24 were incorporated into our last round of field sampling at this site (fieldwork completed October 21, 1994), and this data will be incorporated into the RFI Phase II Report which will be drafted in December of this year.

Please call Mr. Jim Harris, RPM, NAS Oceana at (804) 322-4776 if you have questions or need additional information with regards to this submittal.

Sincerely,

Jim Hauser
for N. M. Johnson, P.E.
Head

Installation Restoration Section
(North)

Environmental Programs Branch
Environmental Quality Division
By direction of the Commander

Enclosure

Quality Performance . . . Quality Results

Copy to:

NAS Oceana (Mr. Will Bullard)

CH2MHill (Mr. Steve Brown)

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☒ Addressee's Address

2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

US ENVIRON. PROTECTION AGENCY
ATTN MR DAVID TOTH
841 CHESTNUT BUILDING
PHILADELPHIA PA 19107

4a. Article Number

P 075 318 726

4b. Service Type

☐ Registered ☐ Insured

☒ Certified ☐ COD

☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 *U.S. GPO: 1992-323-402

DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

PS Form 3800, June 1991

US to ENVIRON. PROTECT AGCY	
MR. DAVID TOTH	
841 CHESTNUT BUILDING	
PHILADELPHIA PA 19107	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	

Receipt for Certified Mail
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

P 075 318 726 CODE 1822(JFH)

Fold at line over top of envelope to the right of the return address

CERTIFIED

P 075 318 726

MAIL

Response to EPA Comments

Comment 1: Tables 1-3, 1-5, 1-8, 1-10, 1-12, 1-13, 1-14, and 1-16 - Detection limits must be identified for each compound analyzed but not detected

We have adjusted the enclosed tables to indicate detection limits. As agreed in the RFI work plan (CH2M HILL, June 1992), we used standard Contract Required Detection Limits (CRDLs) specified for the SW-846 method of analysis. We have indicated the actual detection limits in the tables in this report as an illustration. For individual detection limits, see the laboratory data sheets provided with this response letter. As we agreed in our conference call on September 15, 1994, the Navy will provide a list of generic detection limits to the EPA for its use under a separate cover from the report.

Comment 2: Laboratory data sheets must be provided for all analyses, as well as data validation reports.

A complete set of the Form 1 laboratory data can be found under a separate cover with the data validation reports. Data validation qualifiers are included in the tables. As agreed in our conference call, we have enclosed the summary reports from the data validation results with the separate document.

Comment 3: The footnotes to many of the tables state that certain compounds not listed in the table were analyzed for but not detected in any samples. However, some of the samples indicate "NA" for these same compounds. "NA" is defined in some of the tables as not analyzed. Both statements cannot be true.

A compound is listed in a table if it was detected at any time in any sample at that site. "NA" simply means that a particular sample was not analyzed for the listed constituent. Our procedure has been to reduce the breadth of the analytical parameters to sample only for parameter groups that were detected in the earlier sampling. For example, at some sites we analyzed for Appendix IX and found only PAHs and VOCs the first time we sampled, so subsequent rounds of analyses were for PAHs and VOCs only. Because we report all historical data on one table, "NA" is used to indicate that the constituent was dropped from the list of analytes on the basis of earlier results.

Comment 4: For each site, the extent of soil and ground water contamination must be shown in map form, as isoconcentration maps for individual constituents.

Maps showing the sample location and the analytical results are included in the report. As we agreed in our conference call on September 15, 1994, the Navy has been providing data in this manner during the entire project and the size and nature of the POL sites do not warrant isoconcentration maps for these sites.

Comment 5: Oceana must provide at least one hydrogeological cross section through each unit. If only one cross-section is generated, it should be oriented parallel to the direction of ground water flow.

Only Site 11 has been sampled lithologically. A cross-section for Site 11 has been added. Descriptions of the geology of the station and of each individual site were part of the Phase I RFI report. This stratigraphy at Oceana is quite uniform.

Comment 6: Oceana must provide the location, construction, and current and historical pumping rates for any and all ground water extraction wells within the facility. Moreover, Oceana must indicate where and how any of this water is used.

See page 2-1 of the June 1992 RFI Work Plan. The contamination at the POL sites is not extensive and is not near water supply wells. The POL CMS is focused on surficial soil contamination, not groundwater contamination. Where groundwater contamination was detected, additional work will be performed to investigate the contamination. Since the report is for surficial soil only, it does not address nearby water supply wells. As we agreed in our conference call on September 15, 1994, the Navy will provide this information to the EPA in the near future in a separate submission.

Comment 7: Oceana must indicate the sampling depth for each of the in-situ ground water samples. Was the sample interval across the ground water table, or 7 feet below the water table as originally proposed in the work plan?

Sampling was across the water table. Depths were 4 to 9 feet in 18-GP1, 6.5 to 11.5 feet in 19-GP1, 4 to 9 feet in 20-GP1, and 4 to 9 feet at the four site 24 locations. The work plan stated this incorrectly in the first sentence of the descriptive section on page 3-9 of the final work plan, dated March, 1994. The sampling was consistent with the second sentence, which proposed that the sampling depth be 4.5 to 7 feet.

Comment 8: Figure 1-3 and 1-4: Well 11-MW2 is located in different places than indicated in the Phase I RFI report and in the work plan for this additional work. Please explain this discrepancy.

The location indicated in the Phase 1 RFI report was incorrect.

It was corrected in the final work plan dated March, 1994 and is shown in the correct position in this report

Comment 9: Site 11 - The in-situ ground water sample location 11-GP1 is not immediately down gradient of the southernmost fire fighting training area. Benzene at a concentration of 5 ppb was detected in 11-GP1, indicating that a release to ground water has occurred, and that further investigation of the extent of ground water contamination is warranted. Oceana must propose additional ground water monitoring wells immediately downgradient of this unit, as well as enough wells to characterize the full extent of ground water contamination emanating from this unit.

Sample 11-GP1 is downgradient of the northwestern part of the southern ring. As we agreed in our conference call on September 15, the soil work at Site 11 can proceed without the additional groundwater characterization that the EPA has requested. The Navy will address this concern in the future.

Comment 10: Site 18 - All sampling locations indicate concentrations greater than action levels. Therefore, the horizontal extent of soil contamination has not been determined at either of the storage areas. The vertical extent of contamination has not been determined at the second storage shed. Additional soil sampling must be proposed to determine the horizontal and vertical extent of soil contamination. PCBs were detected at the second storage area. Proposed remedies must be evaluated for their ability to remediate PCBs as well as petroleum hydrocarbons and PAHs.

No additional soil sampling at the northern storage unit is proposed in the final report because the excavation process itself will include iterative sampling. The excavation of the site will include areas near the southern hazardous waste storage area where POL constituents have been detected. The sites are small and almost the entire map area is covered with asphalt or concrete, especially at Site 18. We agreed that the Navy would specify cleanup levels for PCBs, various PAHs, and other constituents, as appropriate, before beginning the excavation work. We also agreed to specify the frequency of sampling and how a stopping point would be determined. The Navy also agreed to pursue contamination underneath asphalt or concrete if the wall samples adjacent to those areas were above limits.

Comment 10a: The actual sampling location shown in Figure 1-5 for soil sample 18-SS4 is different from what was proposed in the work plan. Please explain the discrepancy.

The locations shown are the same in the final work plan dated March, 1994.

Comment 10b: Only one in-situ ground water sample was taken at Site 18. Since ground water flow directions have not been determined for this site, it cannot be determined if the one in-situ ground water sample was downgradient of either of the storage areas. Ground water elevations must be collected from at least three locations immediately surrounding each unit to determine the direction of ground water flow. Then, appropriate sampling locations can be determined for analysis.

We agreed during the conference call that our approach is consistent with the approved work plan, ie. that no wells would be installed if no contamination was detected when analyzing the hydraulic probe groundwater samples. A well was installed between the northern and southern hazardous waste storage areas on Wednesday September 21, 1994 as a part of the characterization work for Site 2E. This well will be analyzed for VOCs, PAHs, and TPH.

Comment 11: Site 19 - Only one in-situ ground water sample was taken at Site 19. Since groundwater flow directions have not been determined for this site, it cannot be determined if the one in-situ ground water sample was downgradient of the site. Ground water elevations must be collected from at least three locations immediately surrounding the site to determine the direction of ground water flow. Then, appropriate sampling locations can be determined for analysis.

The location was beneath the most contaminated areas. Because constituents were detected, no well installation and additional water-level measurements or sampling are proposed. This approach was approved by the EPA in its review of the POL work plan.

Comment 12: Site 20 - Only one in-situ ground water sample was taken at Site 20. Since ground water flow directions have not been determined for this site, it cannot be determined if the one in-situ ground water sample was downgradient of the site. Ground water elevations must be collected from at least three locations immediately surrounding the site to determine the direction of ground water flow. Then, appropriate sampling locations can be determined for analysis.

See the response to Comment 11.

Comment 13: Site 24 - The horizontal and vertical extent of soil and ground water contamination has not been defined. Oceana must propose permanent ground water monitoring wells for this site. Since 1,2-DCE was detected as a major constituent in ground water, soil samples must be analyzed for VOCs in addition to PAHs and metals. Additional soil samples must be collected to define the nature and extent of soil contamination.

Additional hydraulic probe (Geoprobe®) groundwater sampling with onsite analysis at 14 locations and the installation of 6 wells that will be analyzed for VOCs, PAHs, and TPH are proposed in the report. The existence at Oceana of background beryllium concentrations above risk-based concentrations has been documented in Appendix F of the RFI Phase II report (CH2M HILL, June 1994). The future hydraulic probe sampling will help determine the extent of 1,2-DCE in groundwater, which will help identify its extent in soils. We will collect confirmatory sampling during the excavation process.

Comment 14: Figure 2-5: The size of the area of soil needing remediation for Site 24 is larger than drawn. The soil management area must at least include the sampling location 24-SS4A (587 ppm TPH). The full extent of soil contamination cannot be determined from the limited data collected so far and must be investigated further.

The focus of the POL CMS is on shallow soils. The fact that the shallow soil sample (0.5 to 1.0 feet) at 24-SS4A had only 14,500 ppb of TPH and the deeper soil sample (5 to 6 feet, at or below the water table) was 587,000 ppb suggests that there is a groundwater problem. This result was confirmed during the hydraulic probe sampling in mid-September. Iterative sampling and analysis during remediation will help characterize the site more completely as excavation proceeds. The groundwater problem at Site 24 will be addressed along with the RFI sites. The results for groundwater will be included in the RFI Phase II report that will be finalized later this year based on the ongoing investigation.

Comment 15: Since Site 24 includes chlorinated organics as constituents of concern, Oceana must evaluate the effectiveness of each remedy for these constituents as well as for petroleum hydrocarbons. Site 24 is probably not ready for a CMS, since the nature and extent of soil and ground water contamination has not yet been fully characterized.

Sampling of the soil during the RFI did not indicate the presence of chlorinated volatile organic compounds (VOCs). RFI soil samples indicated less than 1 mg/kg of total VOCs. RFI and CMS sampling indicated TPH contamination, which is what the CMS focused on. The technologies that were evaluated would be appropriate for non-chlorinated VOCs. The groundwater does contain contamination, which will require additional investigation. The groundwater at Site 24 will be investigated with the other RFI sites. The proposed groundwater sampling is extensive and should complete the characterization of the groundwater at the site. TCE and 1,2-DCE will be analyzed.

Comment 16: Page 2-1, Target Cleanup Levels - Oceana states that

the primary constituent of concern is TPH. In addition to TPH, PAHs, PCBs, and possibly VOCs are also of concern for soil. Oceana implies that cleanup levels for PAH compounds do not need to be established because no PAH compounds were detected above RBCs when TPH concentrations were below 100 mg/kg. Since not all samples which exceed RBCs for PAH compounds have analyses for TPH, this statement is not supported. Oceana does not indicate what RBCs were considered in evaluating soil concentrations. Soil cleanup levels for all constituents must be established which are protective of ground water as well as for direct contact. Oceana must propose soil clean up levels for each constituent which exceeds action levels.

The RBCs used are distributed quarterly by Roy Smith of the EPA Region III office. The RBCs were used as indicators of potential threat to human health or the environment but are not published as standards. The use of RBCs is described in more detail in our response-to-comments letter to Bob Stroud of EPA Region III concerning the Phase I RFI report and in Appendix A of the RFI Phase I report. Although there are other constituents besides TPH that exceeded potentially applicable guidelines and criteria, TPH is a suitable screening parameter for the excavation of the POL sites. As agreed in the conference call, the Navy and EPA will discuss collecting a round of confirmatory samples for PAHs and other applicable parameters as a last confirmation step after the TPH-based excavation work is completed. As agreed, the Navy and the EPA will come to an agreement on the procedures for sampling during excavation before the remediation work begins. The Navy will consider the use of immunoassay sampling during the excavation work.

Comment 17: Page 2-7, Site 18 - Oceana states that soil is to be excavated to only one foot. Since there is not soil analytical data collected from 1' to 2', excavation may need to be deeper than proposed. Moreover, there is no investigation of the depth of contamination at all for the second storage area. The excavation depth needed to remediate that area is not known.

Iterative samples will be collected during excavation. David Toth stated during the conference call that the approved sampling program is sufficient.

Comment 18: Page 2-7, Site 18 and Site 19 - For these sites Oceana states that contamination is not expected to be present under adjacent areas covered by asphalt or concrete. How will this be verified?

As agreed during the conference call, wall samples will be collected in areas underlying asphalt or concrete. Excavation under these areas will proceed as results dictate.

Comment 19: All sample specific quantitation limits should be provided for all data. A determination that a particular contaminant's absence from a sample means that it is not a problem can only be made if the quantitation limit is evaluated and is sufficiently low to support such an assertion. Providing only an asterisk symbol for many data points tells nothing about whether that particular analysis is sufficient to rule out that contaminant at a concentration of concern.

The complete set of Form I data sheets and a table of generic detection limits will be provided.

Comment 20: The data validation report and all lab report sheets must be provided for all samples.

As agreed in the conference call, we will provide the summary reports for the data validation packages rather than the entire data validation reports.

Comment 21: Validation flags have varying meanings on different tables which is confusing. For example, the "b" flag is defined as "analyte is found in the associated blank as well as in the sample," "reported value was less than the Contract Required Detection Limit, but greater than or equal to the Instrument Detection Limit," and "compound found in laboratory blank as well as sample; sample concentration is less than 10 times blank concentration."

There are some differences in the description of the "b" flag in the organic tables, but all are synonymous. The "b" flag has a different and consistent meaning in the inorganic tables (ie. value is between IDL and CRDL).

Comment 22: Some MCLs are missing from various tables, i.e., methylene chloride and bis(2-ethylhexyl)phthalate. In addition, enforceable action levels have been promulgated for lead and copper and are more recent and more representative criteria with which to compare groundwater results.

All values of methylene chloride and bis(2-ethylhexyl)phthalate were low and were generally detected in the associated laboratory blanks. The MCLs were not exceeded for these organics. We have compared the copper and lead results to the new action levels.

Comment 23: Site 11 - On Figure 1-3, the location of sample 11-SS3 cannot be located on the map. On Table 1-3, no result is provided for sample no. 11-SS8.

The location for 11-SS3 has been added. A sample was collected but was not submitted for 11-SS8 as stated in the footnotes of the figure.

Comment 23a: While no groundwater contaminants were measured above MCL's sample specific quantitation limits need to be examined to confidently rule out the possibility of undetected groundwater contamination. In addition, no MCL has been promulgated for chloromethane and this contaminant was measured in two samples at concentrations exceeding a risk-based concentrations. It is acknowledged that the reported concentrations are estimated, and submission of the data validation report and the sample specific quantitation limits would allow for a determination of whether resampling should be performed to confirm or rule out the presence of significant levels of dichloromethane.

The data validation report and the sample specific quantitation limits have been provided for a determination of this issue.

Comment 23b: Arsenic was reported in 11-GP1 at a concentration of 317 ug/l, far in excess of the current MCL of 50 ug/l or the risk-based concentration of 11 ug/l (noncarcinogen) and 0.038 ug/l (carcinogen). the CMS report suggests that the presence of particulates may account for the occurrence of arsenic in this sample, but this cannot be confidently determined from available information, It is notable that significant levels of arsenic were also reported in groundwater samples obtained from other sites as noted in subsequent comments. Arsenic should be included in any discussion of potential contaminants of concern for this site unless its presence is rule out by additional sampling.

As agreed in our conference call on September 15, the soil work at Site 11 can proceed without the additional groundwater characterization that the EPA has requested. The Navy will address this concern in the future by including metals if further analysis is warranted.

Comment 24: Site 19 - Chloromethane was measured in groundwater from this site at 2 ug/l, exceeding the RBC of 1.4 ug/l. The data validation report and sample specific quantitation limit should be provided to allow for a determination of whether resampling should be performed to confirm or rule out the presence of significant concentrations of this contaminant.

The data validation sheet for sample 19-GP1 is enclosed. The quantitation limit was 10 ppb. There is no MCL or MCLG for chloromethane.

Comment 25: Site 24 - In addition to the contaminants noted in the remedial objectives section of the report, significant levels of arsenic (up to 349 ug/l [dissolved]) and manganese (up to 377 ug/l [dissolved]) were also measured in groundwater at this site. At a minimum, these two metals must be included in future discussions of potential contaminants of concern for this site unless their presence is ruled out by additional sampling.

Metal analysis will be added for the Site 24 monitoring wells on the basis of these results. The metals results will be discussed in the RFI Phase II report.

Comment 26: Section 2, Target Cleanup Levels: Regardless of the presence of TPH above or below 100 ppm, target cleanup levels must be proposed for every contaminant measured at concentrations exceeding health screening levels including, but not necessarily limited to arsenic, PAHs, chloromethane, benzene, and 1,2-dichloroethene.

The Navy and the EPA will discuss and agree upon working action limits before beginning the excavation work at these sites.

Comment 27: Identification of Technologies: This section should also outline which contaminants are targeted by which remedial technologies and identify cleanup levels each technology can achieve for target contaminants.

As agreed in our conference call, the report has been changed to indicate whether the chosen technology can clean up the sites to target levels rather than identify potential cleanup capabilities of all the technologies considered in the screening process.

Comment 28: In addition, in accordance with the Administrative Order of Consent, Section XIV, NOTIFICATION AND CERTIFICATION OF DOCUMENTS, Paragraph 2. Any data and factual presentation submitted by Respondent to this Consent Order which discuss, describe, demonstrate of support any finding or make any representation concerning Respondent's compliance or noncompliance with any requirement of this Consent Order, shall be certified by the Head, Installation Restoration Section, Atlantic Division, NAVFACENGCOM.

The certification is enclosed with this memorandum and will be included in all cases in the future.

Comment 29: Also, in accordance with Section VII, Part F. SUBMISSIONS/EPA APPROVAL/ADDITIONAL WORK, Paragraph 16 all certified documents are to be sent by certified mail.

Documents will be sent by certified mail in the future.

Response to Virginia DEQ Comments

1. Target Cleanup Levels

On page 2-1, it is mentioned that at 100 mg/kg level for TPH is the proposed cleanup level for these five sites. How was this cleanup level determined? Clarification needs to be made between a soil disposal guidance and a cleanup level. The soil disposal guidance was established for the disposal of petroleum contaminated soil.

The presence of concentration of TPH 100 ppm or greater warrants an assessment of risk. Risk assessment can not be conducted on TPH. This class of compounds must be broken down into its constituents: benzene, toluene, ethylbenzene, and xylene. If you were to use the risk associated with benzene to characterize the worst case scenario for impact to human health at this site, reference to the EPA Region III Risk Based Concentration (RBC) Table, dated March 18, 1994, shows that the acceptable concentrations of benzene in commercial/industrial soils is 99 ppm; and 22 ppm in residential soils.

A risk assessment of the site should be performed, also and ecological assessment should be performed. A qualitative, rather than a quantitative, approach has been acceptable in the past for developing an Ecological Risk Assessment, since risk based data is not available for TPH.

Guidance on the cleanup levels maybe directly addressed by the Water Division (TRO) or be made using a risk-based determination.

The cleanup level for the soil is based on the Commonwealth's disposal guidance. The only significant soil contaminant at the POL sites is TPH. As stated in your comment, a risk assessment can not be performed on TPH. The sites that did contain BTEX compounds had them at total levels below 1 ppm. A risk assessment performed using the BTEX compounds would indicated the sites do not pose a risk. The Navy feels that a proactive approach is to remove the surficial soil that contains TPH concentrations greater than 100 ppm. This decision is based on the assumed intent that unlined, therefore uncontrolled landfills, can not accept soil with TPH levels greater than 100 ppm. By removing contaminated soil from an uncontrolled situation to where treatment occurs is protective to the population and the environment.

2. Soil Management

On page 2-6, there is mention that during construction activities, water may be generated. If water is generated either through a dewatering process or as surface water accumulation at or near a contaminated site, it should be collected and disposed of properly. It is unclear how the contaminated water will be disposed. Oceana Naval Air Station is not on the National

Priorities List (NPL). If the contaminated water will be discharge to surface water, then the administrative as well as substantive requirements for discharge must be met.

The text has been revised. During construction activities, any accumulated water in any of the sites will be collected and disposed of at an off-site permitted disposal facility.

3. Recommendation - Implementation

On page 4-2, the implementation of the preferred alternative is either on-site or off-site bioremediation. A clear course of action should be specified in implementation of the preferred alternative. There should be all the details necessary to carry out the implementation. Stockpiling of the contaminated soil on-site is not recommended. Stockpiling of the contaminated soil prior to removal off-site or treatment on site can lead to worker exposure and potential contaminant migration to groundwater.

The implementation of this alternative will not address groundwater contamination. How and when will groundwater contamination be addressed.

The intent of the document was to recommend a preferred treatment alternative, bioremediation. The Navy has available space (next to Site 11) that is far removed from personnel and the main portion of the Base and also is under the responsibility of the Base's security. On-site treatment may prove less costly and also reduce the risk posed by transporting contaminated material off-site to a disposal facility. Any on-site treatment would be required to contain run-on and run-off controls and prevent the migration of any contamination. Soil would be stockpiled on a plastic liner and covered to prevent any contaminant migration.

The purpose of this CMS is to address the remediation of surficial soil contamination. If groundwater is found to be impacted, as is the case for Site 24, the groundwater will require further investigation under the RFI phase. The RFI phase currently is evaluating groundwater contamination at several sites on the Base.

WDCR805/037.WP5